

# Comments on the Draft Criteria for Selection of PMRI Standards

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**DICOM Standards Committee**

**American College of Radiology, Committee on DICOM Standards**

**Co-Chair, DICOM Working Group 20 (Imaging Integration)**

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# Disclaimer

*The opinions expressed herein are those of the author, and not necessarily those of the DICOM Standards Committee, the American College of Radiology, Health Level Seven or The University of Chicago.*

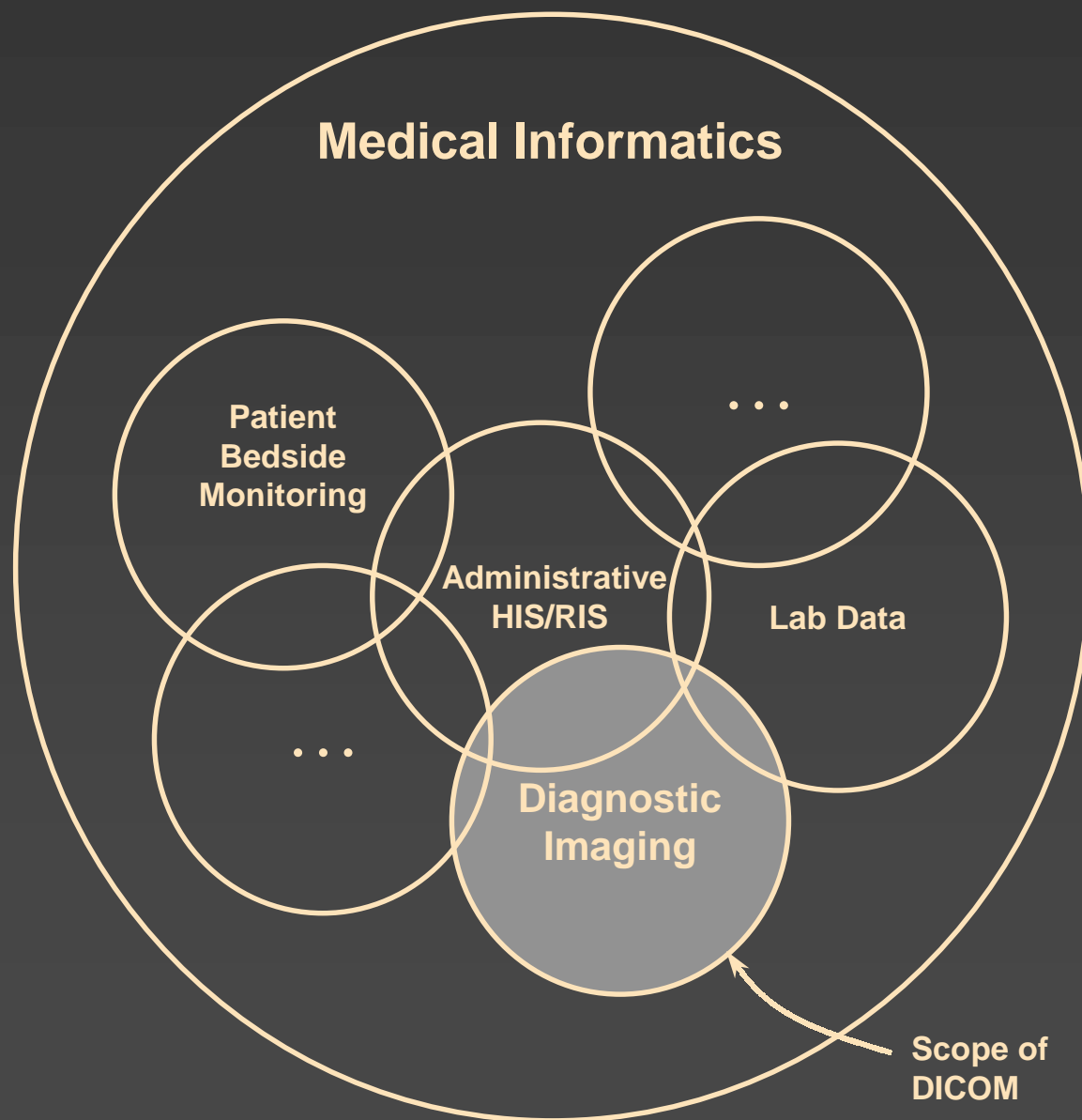
# Today's Testimony

- Facts about DICOM
- Structure of DICOM
- Permanence of Patient Medical Record Information
- Comments solicited in Draft Framework
  - Selection Criteria
  - Questionnaire
  - Proposed PMRI Transactions
  - Additional Comments or Critiques

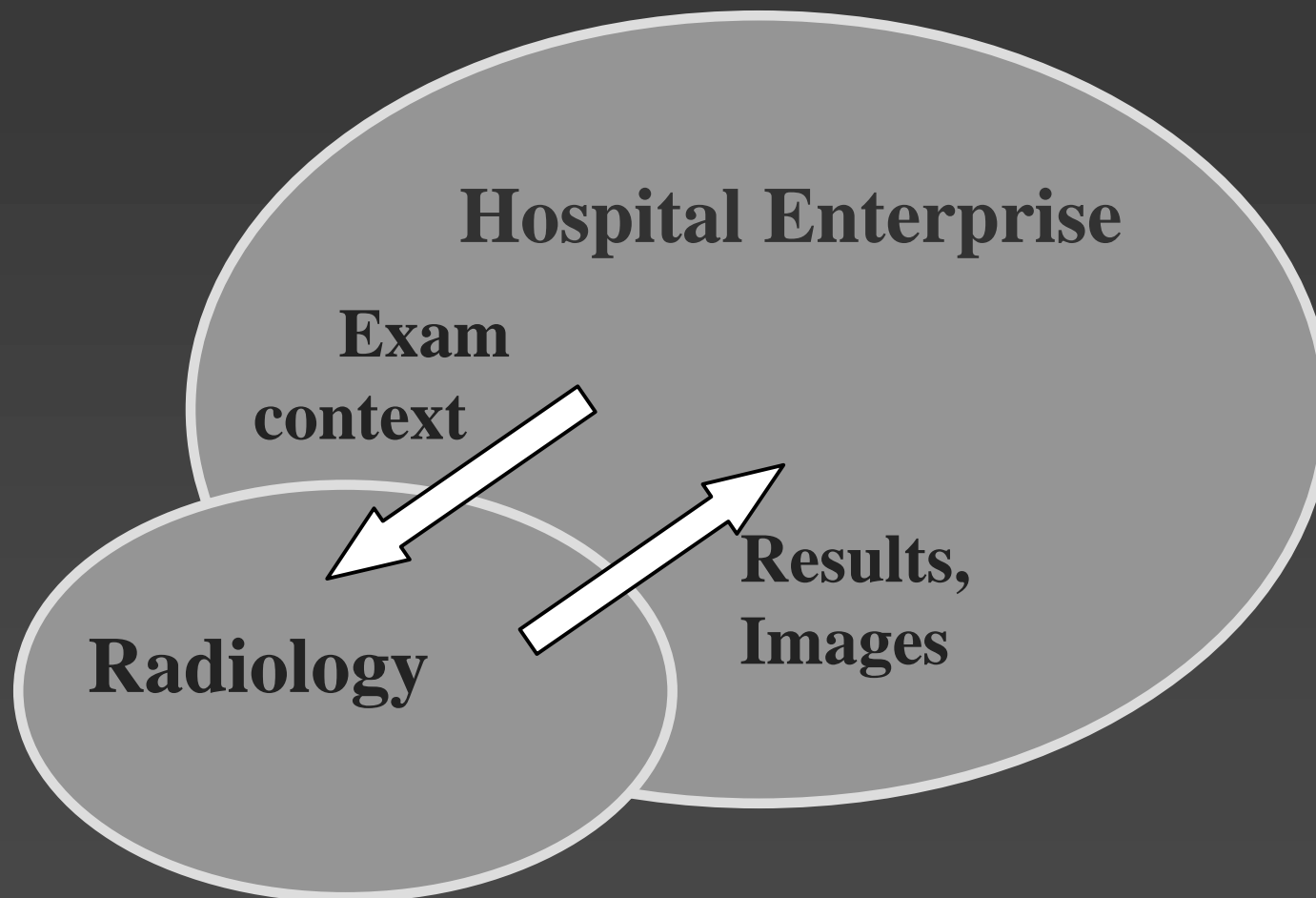
# DICOM

- Digital Imaging COmmunications in Medicine
- Originally ACR-NEMA standard
- Now ISO Type 1 Liaison

# DICOM Scope



# Diagnostic Imaging in the Patient Care Process



# DICOM Information Objects

## Composite

Images

Waveforms

Reports

Presentation States

## Normalized

Patients

Studies

Imaging Service Requests

Requested Procedures

Scheduled Procedure Steps

Performed Procedure Steps

# DICOM Message Services

## Composite

C-STORE

C-GET

C-MOVE

C-FIND

C-ECHO

## Normalized

N-EVENT-REPORT

N-GET

N-SET

N-ACTION

N-CREATE

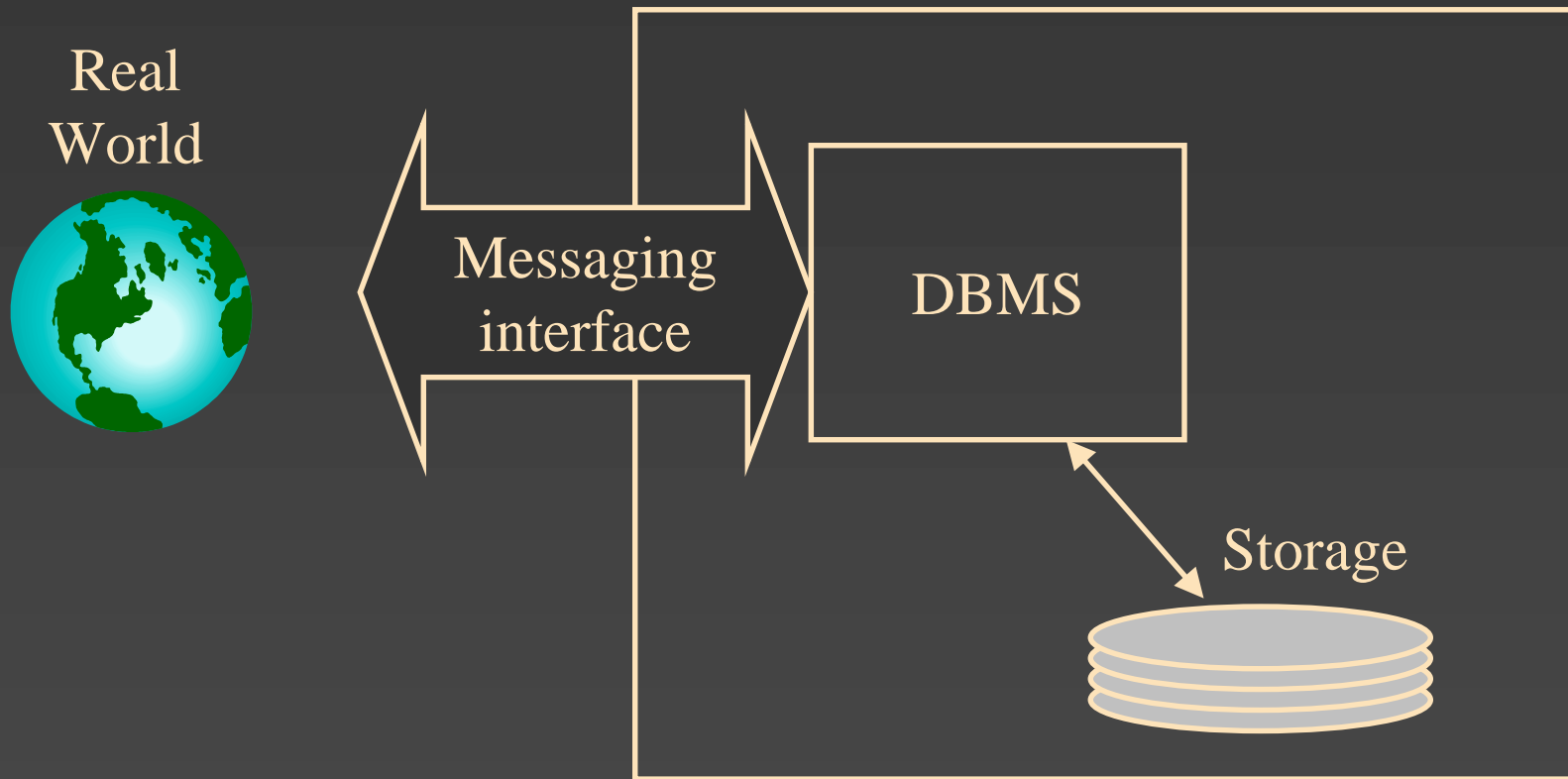
N-DELETE



# Stored information objects

- Part 10 defines files containing composite objects
- Part 11 and 12 define media formats
- Files can be transported using generic transfer protocols
- DICOM files have MIME type application/dicom

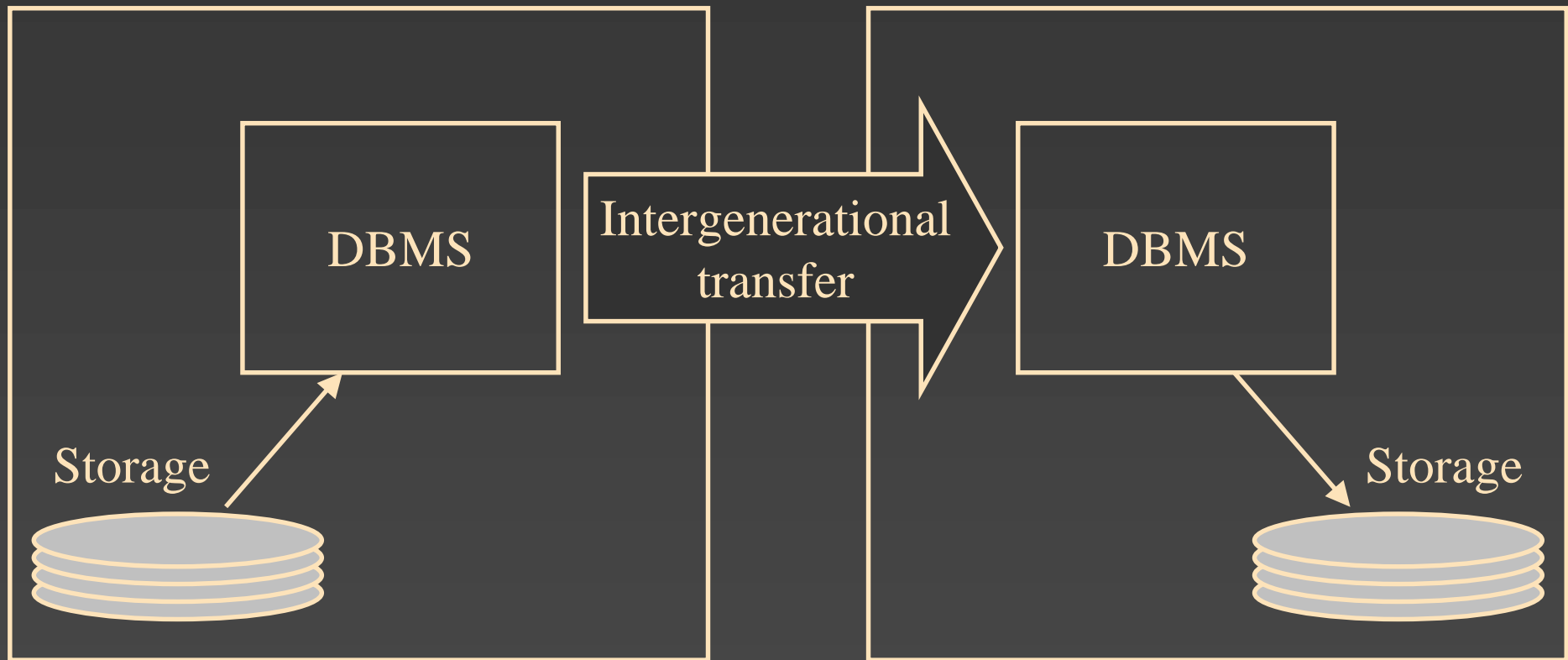
# Message-defined database



# Intergenerational message transfer

Sage (old system)

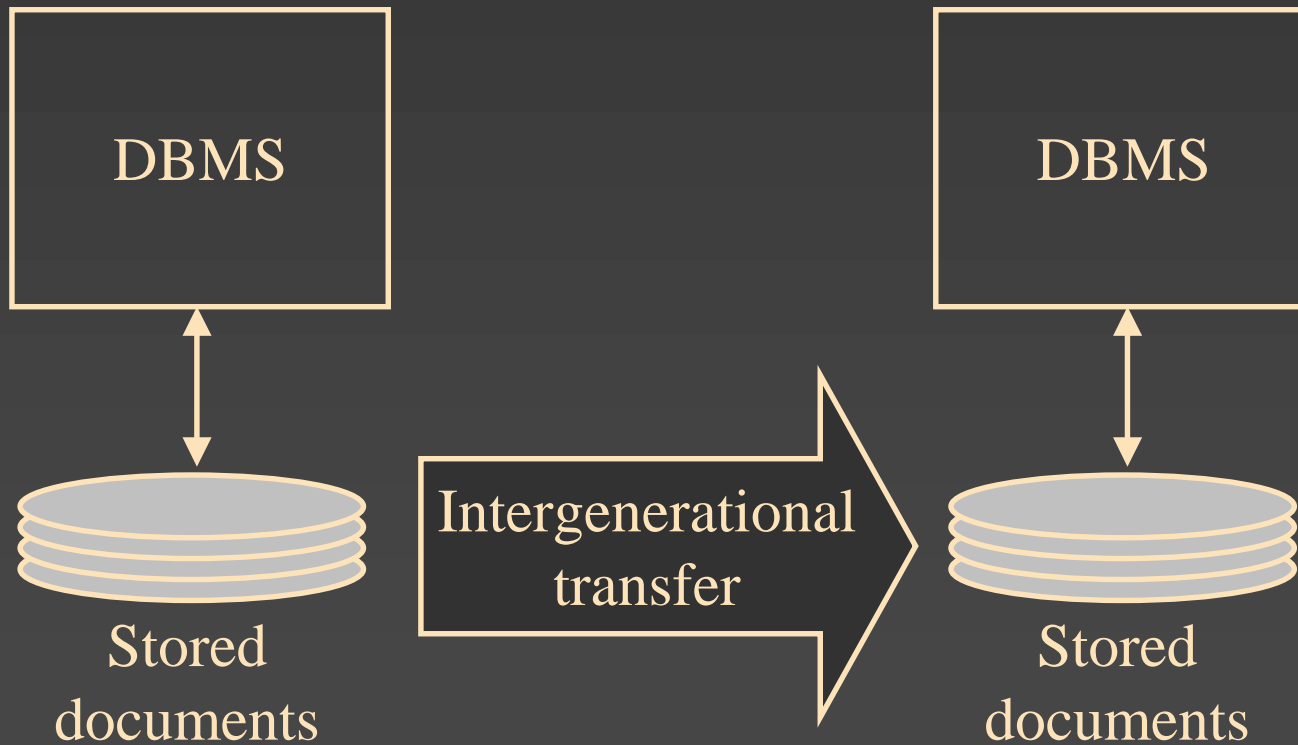
Youth (new system)



# Intergenerational document transfer

Sage (old system)

Youth (new system)



# Comments solicited

1. Selection criteria for PMRI message format standards,
2. A proposed questionnaire to be sent to standards development organizations, and
3. A proposed list of PMRI transactions to be considered for HIPAA standardization recommendations.
4. Additional Comments and Critiques

# Criteria for selection

- Interoperability,
- Data comparability,
- Data quality, accountability and integrity,
- Market acceptance,
- Consistency with other standards,
- Identifiable cost,
- Timely standards development procedures, and
- Flexibility to respond to new requirements,

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# Questionnaire

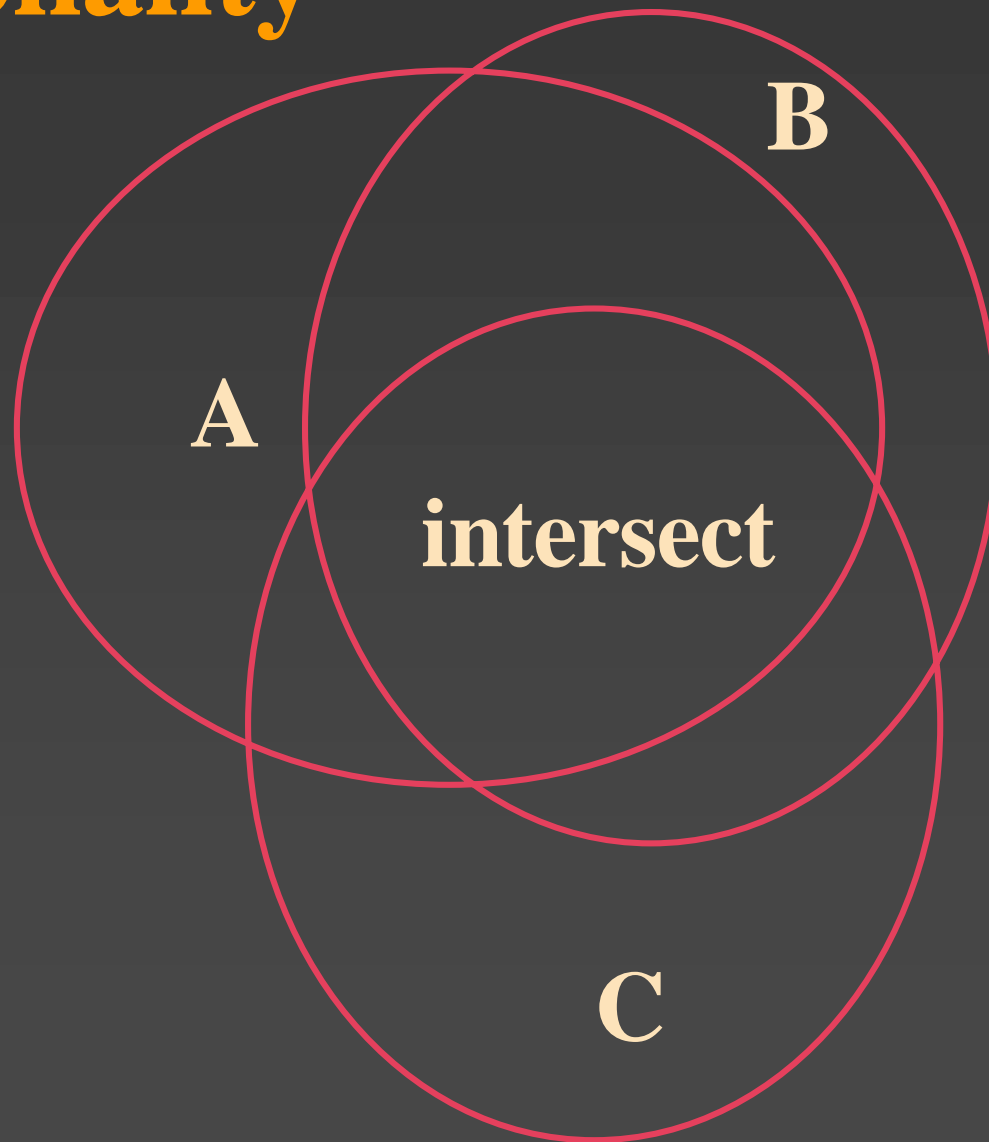
- Add questions about data permanence and data migration
  - How to migrate data to future systems?
  - How to avoid loss of information content in serial migrations?
  - How can completeness of data set be measured?
- Is off-line storage defined?



# Additional Comments

- Standards are not all ready for selecting
- Much remains to be done
- Federal government could help in important ways
  - Encourage/support participation, particularly by providers and academics
  - Consider NLM IAIMS as a model
- Rushing leads to optionality
  - “enemy of interoperability”

# Rapid consensus breeds optionality



# Recommendation

- Narrow scope of Standard Selection at this point
  - Focus on transactions involving permanent record
- Consider standardizing storage formats as well as messages

# DICOM Home Pages



<http://medical.nema.org/dicom.html>

Committee for the Advancement of DICOM

DICOM Resources Page

<http://www.merge.com/dicom/resources/>